

REMARKS

Claims 23-31 are presented for consideration, with Claims 23 and 28 being independent.

Initially, Applicants extend their gratitude to the Examiner for the courtesy extended toward their representative during the personal interview of January 10, 2011. As demonstrated by the claim amendments shown above and the following remarks, independent Claim 23 has been amended along the lines discussed at the interview to further distinguish Applicants' invention from the cited art. Claims 27-31 have been added to provide an additional scope of protection.

Claims 23-26 currently stand rejected under 35 U.S.C. §103 as allegedly being obvious over Furusawa '305, either taken alone or in combination with Lee '657. This rejection is respectfully traversed.

Claim 23 of Applicants' invention relates to a wiring forming method comprised of a first step of supplying a first liquid containing an insulating material on a substrate to form an insulated pattern on the substrate, with the first insulated pattern partially forming a first layer in a single plane, and a second step of, after the first step, supplying a second liquid containing a conductive material on the substrate to form a first conductive pattern, with the first conductive pattern partially forming a first layer in the single plane. Additional steps include a third step of, after the second step, applying the second liquid on the first conductive pattern to form a plurality of through hole portions on the first conductive pattern, with the plurality of through hole portions partially forming a second layer, a fourth step of, after the third step, applying the first liquid on the first layer that the first insulated pattern and the first conductive pattern have formed to form a second insulated pattern as part of the second layer that the plurality of through hole portions partially formed, and a fifth step of, after the fourth step, forming a part of a third

layer by supplying the second liquid on the second layer so as to connect the plurality of through hole portions.

In accordance with Applicants' invention, a high performance wiring forming method can be provided.

As discussed at the interview, the Furusawa patent relates to a multilayered wiring board formed using a liquid drop discharge system. With reference to Figures 1(a) through (g), a layer of conductive ink first forms a wiring pattern and, in the next step, interlayer conductive posts are formed for conducting a second layer through an interlayer insulation film (Figure 1(f)). An interlayer insulation film is then formed by ink 21 (Figure 2(a)), followed by a wiring pattern 31 and interlayer conductive posts 32 being formed, and followed by another interlayer insulation film 33 (Figures 3(a) and (b)).

In contrast to Applicants' claimed invention, and as discussed in the interview, Furusawa does not teach or suggest partially forming a first layer in a single plane. To the contrary, the first layer in Furusawa is shown to comprised a wiring pattern 17 in one plane and upstanding conductive posts 18 in another plane. As shown in Figures 2(a) and (b), therefore, this first layer including the conductive posts is formed in multiple planes. Moreover, the steps of forming the wiring board in Furusawa, i.e., forming two layers of conductive patterns (a first layer wiring pattern 17 and second layer conductive posts 18) first before an insulating pattern, is directly opposite to the method of Claim 23 whereby an insulating pattern is formed first and then a conductive pattern is formed.

For at least these reasons, it is submitted that Furusawa fails to teach or suggest Applicants' invention as set forth in Claim 23.

The secondary citation to Lee relates to a method for forming a multilayer ceramic electronic device whereby a dielectric sheet is formed on a conductive layer. Lee fails, however, to compensate for the deficiencies in Furusawa as discussed above.

Accordingly, reconsideration and withdrawal of the rejection of the claims under 35 U.S.C. §103 is respectfully requested.

Independent Claim 28 is also submitted to be patentable. In Claim 28, a wiring forming method includes a first step of supplying a first liquid containing an insulating material in a single plane on a substrate to form an insulated pattern on the substrate, with the first insulated pattern partially formed in the first layer, and the second step of, after the first step, supplying a second liquid containing a conductive material in a single plane on the substrate to form the first conductive pattern, the first conductive pattern partially forming the first layer. Additional steps include applying the second liquid on the first conductive pattern, applying the first liquid on the first layer, and forming a part of a third layer, as provided for in Claim 23.

Accordingly, it is submitted that Applicants' invention as set forth in independent Claims 23 and 28 is patentable over the cited art. In addition, dependent Claims 24-27 and 29-31 set forth additional features of Applicants' invention. Independent consideration of the dependent claims is respectfully requested.

In view of the foregoing amendments and remarks, it is respectfully submitted that the pending claims are allowable over the art of record, and that the application is in condition for allowance.

Favorable reconsideration and early passage to issue of the application are earnestly solicited.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

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